

LISTING OF CLAIMS

1. (Currently Amended) An electrode (35) for metal vapor-containing discharge lamps, made from a high-melting, electrically conductive material, ~~preferably from tungsten or a predominantly tungsten-containing material,~~ comprising a continuous pin shaft (36) and a pin-shaped head part (37) which defines a longitudinal axis L, ~~characterized in that~~ wherein at least one hole (39) is arranged in the continuous pin, the hole arranged essentially transversely with respect to the longitudinal axis, in particular at an angle of 60 to 90 degrees with respect to the longitudinal axis, in the region of the head part (37).
2. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~ wherein the continuous pin shaft and the head part have has a uniform, predetermined diameter D ~~for the pin.~~
3. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~ wherein the continuous pin comprises a shaft part and a head part and the head part has a diameter D2 which extends beyond that of the shaft part.
4. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~ wherein the hole is continuous or is in the form of a blind hole.
5. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~ wherein the head part contains at most three holes.
6. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~ wherein the diameter of the hole varies, the hole having a maximum diameter B.
7. (Currently Amended) The electrode as claimed in claim 6, ~~characterized in that~~ wherein the maximum diameter is in each case approximately the same size in the case of a plurality of holes.

8. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~
wherein the hole is linear.
9. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~
wherein there are a plurality of holes and wherein the plurality of holes lie in one plane.
10. (Currently Amended) The electrode as claimed in claim 9, ~~characterized in that~~
wherein the plurality of holes are connected to one another.
11. (Currently Amended) The electrode as claimed in claim 4, ~~characterized in that~~
wherein the continuous pin has a diameter, D, and each blind hole has a depth of at least 50% of D.
12. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~
wherein the continuous pin comprises a tip and wherein the tip (7) of the head part is rounded off.
13. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~
wherein the continuous pin comprises a tip and has a diameter D and the distance between the ~~hole~~ (center of the hole) and the tip is denoted by A, the ratio A/D being in the range between 1 and 6 (~~end values~~ inclusive).
14. (Currently Amended) The electrode as claimed in claim 1, ~~characterized in that~~
wherein the ratio between the diameter B of the hole and the diameter D of the head part is between 0.05 and 0.3 (~~end values~~ inclusive).
15. (Currently Amended) A lamp having at least one electrode as claimed in claim 1, the lamp having a discharge vessel which contains metal vapor, ~~in particular mercury and/or sodium~~, the discharge vessel being produced from glass or ceramic.
16. (Currently Amended) A method for producing an electrode, in which the electrode

has a pin-shaped head part having a longitudinal axis, ~~characterized in that~~ wherein a hole is produced essentially transversely with respect to the longitudinal axis by short laser pulses of a maximum of 10 μ s in duration.

17. (Currently Amended) The method as claimed in claim 16, ~~characterized in that~~ wherein the laser pulses are produced by a laser beam and the laser beam is focused.

18. (Currently Amended) The method as claimed in claim 16, ~~characterized in that~~ wherein the laser pulses have a rate of repetition and the rate of repetition of the pulses is at least 1 kHz.

19. (Currently Amended) The method as claimed in claim 17, ~~characterized in that~~ wherein the laser beam has an energy density and the energy density of the focused laser beam is above the energy density required for sublimation of the material of the electrode.

20.(New) An electrode for metal vapour-containing discharge lamps, made from high-melting, electrically conductive material, comprising a shaft which defines a first longitudinal axis, and a head part which defines a second longitudinal axis, the shaft part and the head part positioned so that the second longitudinal axis is transverse to the first longitudinal axis, and in which at least one hole is positioned in the head part and arranged transversely with respect to the second longitudinal axis.